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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/312,302	05/14/1999	MARIO D. NEMIROVSKY	P3803	2422

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EXAMINER

DONAGHUE, LARRY D

ART UNIT	PAPER NUMBER
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2154

DATE MAILED: 05/22/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/312,302

Applicant(s)

Examiner
Harry Donaghy

Group Art Unit
2156

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 04/14/03
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-42 is/are pending in the application.
- ☐ Of the above claim(s) is/are withdrawn from consideration.
- ☐ Claim(s) is/are allowed.
- ☒ Claim(s) 1-42 is/are rejected.
- ☐ Claim(s) is/are objected to.
- ☐ Claim(s) are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

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1. Claims 1-42 are presented for examination.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 5-6, 8-12, 15-17, 19-20, 22-26, 29-31, 33-34, and 36-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Nemirovsky (DISC, A Dynamic Stream Computer).

Nemirovsky taught the invention as claimed including a processor executing a plurality of streams (page 63), a set of functional resources page (101 and 102) , interrupt logic (page 96) and interrupts are directed to one or more specific streams (page 63).

As to claim 2 and 3, Nemirovsky taught one exception or interrupt directed to two or more streams (page 63) and two or more interrupts or exceptions are directed to one stream (page 63).

As to claim 5, Nemirovsky taught that the directing is programmable (pages 94-98).

As to claim 6, Nemirovsky taught the interrupt logic refers to a data store (page 96, fig. 5.13).

As to claim 8 and 9, Nemirovsky taught the interrupts are from an external device and software interrupts (page 95).

As to claim 10, Nemirovsky taught a mask (page 96).

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As to claims 11-12 , Nemirovsky taught after interrupting the streams and vectoring to a service routine (pages 96-97).

Claims 15-17, 19-20, 22-26, 29-31, 33-34, and 36-40 fail to teach or define above or beyond claims 1-3, 5-6, 8-12, and are rejected for the reasons set forth above.

4. Claims 4, 13-14, 18, 27-28, 32 and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nemirovsky as applied to claims 1-3, 5-6, 8-12, 15-17, 19-20, 22-26, 29-31, 33-34, and 36-40 above, and further in view of Nemirovsky et al. (DISC, A Dynamic Stream Computer).

Nemirovsky et al. (DISC, A Dynamic Stream Computer) reference was cited by applicant on paper no.2.

As to claims 13, 27 and 41, Nemirovsky did not expressly teach delaying the vectoring to a service routine, Nemirovsky et al. taught that this technique is useful in synchronization (page 167, section titled Interrupts). It would have been obvious to one of ordinary skill in the art to combine these references as they are directed to the same device.

As to claims 14, 28, and 42, Nemirovsky taught that different streams vector to different service routines (page 96, first paragraph).

As to claims 4, 18 and 32, Nemirovsky (page 64) directing is static at processor design, by suggesting it would be beneficial to have a dedicated IS for interrupts.

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5. Claims 7, 21 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nemirovsky as applied to claims 1-3, 5-6, 8-12, 15-17, 19-20, 22-26, 29-31, 33-34, and 36-40 above, and further in view of applicant's admission.

The applicants admission on paper no. 8, last paragraph of page 8 continued on to page 9, set forth that conditional and dynamic mapping is well-known in the art. It would be obvious to one of ordinary skill in the art to substituted one well known method of interrupt assignment for another to achieve the optimal desired performance.

6. Applicant's arguments filed 4/17/2003 have been fully considered but they are not persuasive.

7. In the remarks applicant argues that the prior art fails to teach a specific interrupts or expectations are detected and at the time of their detection a specific stream is directed to process the specific interrupts or expectations.

RESPONSE

The examiner disagrees as Nemirovsky expressly teaches that the interrupt can directly activate an IS (page 63) and that an interrupt can create its own instruction stream.(page 49). The activation of the IS would be in response to the detection as it is expressly taught that the interrupt routine is finished , the throughput is dynamically reallocated (page 49). Further the reference set forth the IS are dynamically assigned (page 81). The reference clearly teach that in

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response to an interrupt that a stream is created, that stream would be directed to process the interrupt.

8. A shortened statutory period for response to this action is set to expired THREE (3) months, ZERO days from the date of this letter. Failure to respond within the period for response will cause the application to be abandoned. 35 U.S.C 133.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to L. Donaghue whose telephone number is (703) 305-9675. The examiner can normally be reached on M-F from 8:00 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An , can be reached on (703) 305-9678. The fax phone number for an official fax is (703) 746-7238, an after-final fax is 703-746-7238 and a draft or non-official fax is 703-746-7240.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

LARRY D. DONAGHUE
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to be 'LD', with a long horizontal line extending to the right.